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Approved For Release 2003/08/05 : CIA-RDP78B05171A000800030021-6

10 March 1970

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MEMORANDUM FOR: All Division and Staff Chiefs, TSSG, NPIC

SUBJECT: TSSG Monthly Report - February 1970

1. The attached TSSG report covering January 1970 (excluding SSD) is for your use.

2. Please note that the overall classification of the report is TOP SECRET - [redacted]

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Projects & Programs Staff, TSSG, NPIC

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Attachments:

As stated above

Distribution:

- Cy. 1 - NPIC/ExDir.
- 2 - NPIC/TSSG/APSD
- 3 - NPIC/TSSG/ESD
- 4 - NPIC/TSSG/PPS
- 5 - NPIC/TSSG/RED
- 6 - NPIC/TSSG/SSD

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MEMORANDUM FOR: Chief, Projects &amp; Programs Staff, TSSG/NPIC

ATTENTION:

SUBJECT:

APSD Activity Report for February 1970

1. The following items of significant interest occurred in APSD during February 1970:

a. Exploitation Support

(1) Photogrammetric Analysis

(a) Test results of the STEIN 8A data show that it can be used with the ground photo program to obtain XY, YZ, and XZ plots from stereo mensuration.

(b) The [ ] color ensemble averaging subroutine has been adopted for black and white materials to find steps of scanned step wedges.

(2) Operational Activities

(a) The NPIC/TSSG/APSD technical consultant [ ] attended the ARGO Disaster Study Group meeting held at the USGS Reston Office on 28 January. A report [ ] dated 26 Feb) has been prepared on the proceedings.

(b) The NPIC Configuration Control Board (CCB) representative [ ] attended the CCB meeting held in [ ] on 10-12 February. A briefing was presented on NPIC's plan to fully utilize all [ ] processing/reproduction capabilities.

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SUBJECT: APSD Activity Report for February 1970

(c) APSD personnel attended the KH-4B Payload Information Meeting (PIM) held in [redacted] on 17-18 February.

(d) Extensive support including operational research and briefings was provided to the O/DIR, NPIC, DDS&T, and NRO.

b. Collection Systems Support

(1) Systems/Films Under Development

(a) It was agreed in a meeting on 13 Feb. between APSD and DDS&T OSA personnel that no further Red Dot test flights of SO-242 will take place until the Color Task Force Committee establishes collection guidelines. *and exploits him*

(b) A report [redacted] dated 6 Feb.) has been prepared on the evaluation of special duplicates made on film types SO-369 and 6451.

(c) A briefing on [redacted] color film was presented on 5 Feb. to the Director, NRO and his staff.

(d) Two [redacted] test missions were evaluated. Results of the evaluations were discussed in a meeting held on 19 Feb. where it was requested that APSD evaluate all future [redacted] test and operational flights until favorable results are achieved. A report (TSSG/APSD/IEB-023/70 dated 24 Feb) has been prepared on the meeting.

(2) Operational Systems

[redacted]  
drones) missions were evaluated.

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SUBJECT: APSD Activity Report for February 1970

(b) Work on satellite Performance Evaluation Reports (PERs) during the month consisted of KH-4 missions (in Repro.), (70% complete) and missions (complete) (in Graphics), (25% complete). Special reports on SO-242 color film will be included with PERs on

c. Support to Research and Development

(1) Micro-d traces were prepared for RED/TSSG of step wedges and positive and negative Gaussian filters.

2. The following significant action items are anticipated for the month of March 1970:

a. Series of briefings to acquaint DDS&T analysts with the potential value of image enhancement.

b. Initiation of contract with [ ] for Handbook on Evaluation of Reproductions.

c. Attendance at the following meetings:

(1) [ ] PET meeting on 3-5 March at Westover AFB.

(2) ARGO meeting on 9 March at NPIC.

(3) SENIOR PEG meeting at NPIC.

(4) [ ] PIM meeting on 18 March at [ ]

d. Briefing to [ ] committee on the data flow required for satellite mission breakdown.

e. Initial phase handling of KH-4 [ ] scheduled for [ ]

Chief, Applied Photo Science Division,  
TSSG/NPIC

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6-7 - NPIC/TSSG/APSD

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TSSG/ESD-15/70  
5 March 1970

MEMORANDUM FOR: Chief, Technical Services & Support Group, NPIC  
THROUGH : Chief, Projects & Programs Staff, TSSG  
Executive Officer, TSSG  
SUBJECT : ESD Activity Report -- February 1970

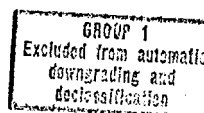
1. Noteworthy Events -- February 1970

a. Project Activity:

- (1) The Equipment Performance Branch (EPB) performed acceptance inspection on 140 items of equipment for Center components including Rhomboids, Objectives and Light Tables.
- (2) EPB received 50 requests for emergency maintenance and serviced 251 instruments under the preventive maintenance program.
- (3) Thirteen modification, design and fabrication tasks were completed by EPB.
- (4) Initial testing of the [redacted] 1540 Light Tables was performed by Test & Evaluation personnel at the manufacturers' plant in an attempt to expedite the test and evaluation cycle.
- (5) A new project, "Electromagnetic Safety Hazards", was initiated by TEB.
- (6) Testing of the Digitized Measuring Light Table was started again after correction by the manufacturer. The Table failed again shortly after starting the new test cycle.
- (7) TEB conducted additional vibration survey work in support of IEG.
- (8) The light table brightness survey was completed and analysis of data started.

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b. Personnel Activity:

(1) [ ] attended the ten-day maintenance course for Sanders Associates CRT Display Units.

(2) [ ] attended the Reliability Maintainability Course sponsored by DDS&T at Headquarters.

(3) Three applicants were interviewed for placement in the TEB vacancy.

2. Anticipated Events: March 1970

a. Project Activity:

(1) Completion of preliminary report on light table brightness.

(2) Evaluation of the [ ] 1540 Light Table.

(3) Evaluation of the [ ] 1540 Light Table.

(4) Pre-acceptance testing of the Advanced Stereo-Rhomboid Mod. II.

(5) Distribution of the Twin Stage Comparator Interim Test Report. The unit is expected to be returned to [ ] for redesign and modification as a result of tests.

(6) Initial testing of the [ ] Wide Field Filar Eyepiece.

b. Personnel Activity:

None.

[ ]

Chief

Engineering Support Division, TSSG

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NPIC/TSSG/PPS-019-70  
6 March 1970

MEMORANDUM FOR: Chief, Technical Services and Support Group, NPIC  
SUBJECT: Projects & Programs Staff Monthly Report - February 1970

A. During February, the Projects & Programs Staff conducted many regular and specific staff functions for TSSG and also carried out the following additional actions. (Including, (1) daily representation to the Production Management Board, (2) frequent working level liaison contacts with PPBS on budget matters, and (3) with PSG on production matters.)

1. Prepared for, conducted and reported on the [ ] meeting for February and attended bi-monthly meetings of COMIREX. (Many liaison contacts with members and observers were handled through this office.) 25X1

2. Helped provide for two [ ] sponsored imagery exploitation equipment briefings at two COMIREX meetings. 25X1

3. Assisted RED in helping to coordinate TSSG Division responses to the Mid-Seventies P.I. Workstation Concepts.

4. Coordinated and worked out the allocation of travel funds within TSSG, involving complete and detailed schedules, priorities, justifications, etc.

5. Reviewed and coordinated responses to the NPIC 5 Year Plan for TSSG.

6. Concluded Panel B matters on the evaluation of GS-11's using the new evaluation forms.

B. During March, the following significant actions are anticipated:

1. Prepare for and conduct the [ ] meeting for March. Also, prepare for an [ ] visit to U.S. Geological Survey, Reston and [ ] Westover AFB. 25X1

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SUBJECT: Projects & Programs Staff Monthly Report - February 1970

2. Study and report on the FY-71 T/O requirements for TSSG.
3. Provide assistance to the Executive Officer, TSSG and SSD for the future Center facilities requirements.
4. Prepare for and conduct TSSG Panel B meeting on evaluation of GS-09's and 10's.
5. Gather facts and prepare for the ultimate installation of the IDX installation in NPIC. (This project started the later part of February.)



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Chief, Projects & Programs Staff, TSSG, NPIC

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NPIC/TSSG/RED-078/70  
4 March 1970

MEMORANDUM FOR: Chief, Technical Services & Support Group

ATTENTION : [ ] PPS/TSSG

SUBJECT : RED Monthly Report on Significant Events  
(February 1970)

A. Significant Items of Interest for February 1970.

1. Dry Process Equipment. NPIC briefings were conducted on two pieces of dry process equipment; i.e., the Enlarger Reader/Printer and the modification of the Diazo Printer/Processor. The project approval requests are in process.

2. High Precision Stereocomparator. The Committee on the High Precision Stereocomparator made recommendations concerning the problem of additional memory core capacity for the 516 [ ] computer which is an integral part of the HPSC. The project approval request is being prepared.

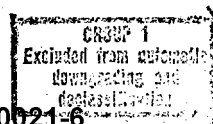
[ ] preliminary tests at [ ] indicate that the optical components for the High Precision Stereocomparator exceed specifications. The [ ] three-week acceptance test at [ ] is scheduled for 9 March 1970. The April shipment date still looks good. However, this date depends upon the results of the final acceptance test.

3. Advanced Stereo Rhomboids. [ ] has submitted a proposal for 0.25X and 0.50X objectives for the Advanced Stereo Rhomboids.

4. [ ] Binocular Tube Magnifier. Evaluation of the [ ] Binocular Tube Magnifier has been completed. The instrument is only partially successful--optical convergence at high magnification was unsatisfactory. There is no apparent interest in a production procurement of this instrument.

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SUBJECT: RED Monthly Report on Significant Events (February 1970)

5. Light Table Vibration. [ ] has submitted a proposal for investigating the vibration problem in light tables. 25X1
6. 1540 Light Tables. [ ] 1540 prototype light tables preacceptance tests have been completed. The [ ] tables are expected to be received on 2 March. 25X1 25X1
7. Image Comparison Microstereoscope. A letter was received from [ ] during February 1970 confirming [ ] willingness to absorb additional costs of this development to the extent of [ ] Difficulties in assembly have necessitated modification of the central linkage-- a revised design will be forwarded to NPIC during the first week of March 1970. Despite this and other assembly difficulties, [ ] still predicts completion on schedule and with no additional costs. A preliminary optical alignment was completed--[ ] claims unexpectedly good resolutions of 6 lines/mm power. 25X1 25X1 25X1 25X1
8. Automatic Stereoscanner. The [ ] proposal for completion of the scanner development has been received. We are concurrently evaluating the proposal, along with a proposal from [ ] Division, for an Engineering Audit of the development at [ ] 25X1 25X1
9. Stereogram Printer Optical Development. [ ] has not completed a revised statement of work for the first 12 months, as predicted last month. The Lens Designers have encountered difficulties in achieving desired resolutions at minimum magnification of 2X, and we are considering raising the minimum to 4X. Our optical consultant, [ ] has recommended a change in the anamorphic design from cylinder lenses to a prismatic arrangement. [ ] agreed and is now working in that direction. 25X1 25X1
10. Comparison of Line Scan and Photographic Images for Target Identification. [ ] personnel reviewed the final report from [ ] entitled "A Comparison of Line Scan and Photographic Images for Target Identification," in terms of planning the second phase of the research effort. Recent discussions with TSSG management and [ ] scientists have 25X1 25X1

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SUBJECT: RED Monthly Report on Significant Events (February 1970)

resulted in a tentative experimental design which shall evaluate GOB photointerpretation with ground resolution characteristic of present as well as future photographic acquisition systems.

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11. Mid-70's P. I. Workstation. [redacted] met with DC/PSG on 4 and 25 February, and with C/OD/IEG and his staff on 9 February to coordinate the Center's evaluation of [redacted] Mid-70's P. I. Workstation concepts.

12. Light Table "Sunburn". RED received from the Office of Medical Services a preliminary evaluation of a reported "sunburn" caused by a high intensity light table. The table was sent to the National Bureau of Standards in order to determine the characteristics of radiant energy being emitted by the table in question.

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13. Briefing for IEG Interpreters. [redacted] ATB personnel chaired a briefing for IEG interpreters who participated as subjects in [redacted] P. I. Target Knowledge and Hunting and Reasoning tests during Phase I of the BY 69-70 contract.

14. P. I. Training Program. HFS/ATB personnel also chaired a coordination meeting with the IEG/TSSG task force to develop a list of candidate targets for [redacted] P. I. Training Program currently under development.

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15. Chip R&D Implementation Investigation. A Center-wide Coordination Committee met to evaluate the progress of the Chip R&D Implementation Investigation, Contract [redacted] with [redacted] [redacted] A thorough discussion and evaluation of [redacted]'s experimental design and overall approach was realized during the three-day conference. Special emphasis was placed upon the compatibility of the proposed chip system alternatives and other information systems currently under consideration for the Center.

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- 25X1 16. Unconventional Photographic Systems. Briefings for the Unconventional Photographic Systems project were completed. The staff study has progressed to the TSSG level for this [ ] item.
- 25X1 17. RIT Grant Program. Thesis proposals and reports which have been in arrears under the RIT Grant Program were received. It is now considered on schedule.
- 25X1 18. R&D Proposals. [ ] EL/ATB, generated 1971 R&D proposals in the areas of (a) study of specialized color reproduction methods for color films, and (b) producing a colorimetric control target for quality control of color films.
- 25X1 19. Support to DDS&T. On 17-20 February [ ] provided special support and consultation at Headquarters to DDS&T related to image manipulation. 25X1
- 25X1 20. Image Quality Assessment Briefings. On 20 February [ ] gave the first of a series of orientation briefings to RED and APSD personnel. This briefing covered Image Quality Assessment. Future Friday briefings will cover other aspects of laboratory operations and contractual efforts.
- 25X1 21. Fortran IV Program. [ ] EL/ATB, has written a Fortran IV program for the Univac 494 computer. This program, called [ ], takes spectrophotometric data from two individual dye layers with an equivalent neutral density of one and generates the theoretical color coordinates for all combinations of these two dyes at density levels from 0.0 to 3.0 at intervals of 0.1. This provides both the I.C.I. and the N.B.S.U.C.S. color coordinates and their luminosity. This program has yet to be validated. 25X1
- 25X1 22. FY-71 R&D Program. Final compilation of the detailed project level FY-71 R&D Budget was undertaken this month. This is in anticipation of the OPPB-NPIC/PPBS FY-71 Operating Budget Call which is scheduled for 15 April 1970.
- 25X1 23. CCB Meeting. [ ] represented NPIC R&D interests at the CCB meeting held at [ ] 10-12 February. He provided specific recommendations concerning the 25X1

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SUBJECT: RED Monthly Report on Significant Events (February 1970)

Production Oriented Color Enlarger, Narrow-Band Color Viewer Study, Development of a High-Fidelity Color Duping System, and Evaluation of Image Distortions over distances of 100 micrometers or less. Recommendations on the second and fourth items were accepted; those on the first and third items were taken under advisement.

24. Mid-70's P. I. Workstation. Considerable time was spent throughout the month attempting to solicit and coordinate inputs for the next phase of this planning program. All inputs are promised by the end of this week. Since the due date for these was 26 January 1970, the date for the preliminary wrap-up briefing must be slipped from 2 March to 16 March.
25. Automatic Target Indexing Device. This equipment is still scheduled for delivery in September 1970. A preliminary schedule has been formulated for the T&E, Training, and Operational evaluation of this device after its delivery. Briefings on the ATID were presented to [ ] and to COMIREX.
26. Advanced Automated Graphics. A series of briefings and demonstrations on the capabilities of the Adage Graphics Terminal were presented at the National Institutes of Health using their Adage equipment. These demonstrations were tailored to NPIC functions of report editing and graphics manipulation. Sixty-nine people from throughout the Agency attended these demonstrations and their reactions were quite favorable as to its potential. A film is being prepared of this demonstration.
27. Wide-Field, High-Powered Anamorphic Stereoviewer. This project, which has been in a "stop-work" position for several months, is now ready to proceed into the fabrication phase with a new schedule and new technical milestones.
28. Vu-graph Maintenance. All of RED's vu-graphs have now been filed in a logical manner. An index and checkout procedure has been established.

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29. IEG Key. At the request of Chief, TSSG, a study was conducted to determine whether any cost reductions could be made in the production of a newly designed IEG interpretation and identification Key. A report has been forwarded listing specific recommendations.
30. Contract Information System. In response to a directive from Chief, RED, the Contract Information System inputs have been updated and corrected. A new format for the Data Sheets has been developed in an attempt to reduce duplication of effort. Savings should be in the area of 25% to 30% in man-hours.
- 25X1 31. Personnel. [ ] returned from leave on 24 February 1970. [ ] entered on duty on 16 February 25X1 from TSD. [ ] is a chemist and will be primarily 25X1 concerned with unconventional emulsions.
32. Training. [ ] completed 25X1 the Fortran IV Programming Course conducted by AID/PSG.

B. Anticipated Items of Interest for March 1970.

1. Image Comparison Microstereoscope. [ ] expects assembly 25X1 to be complete and testing to start by 20 March.
- 25X1 2. Automatic Stereo Scanner. On 4 March 1970, Messrs. [ ] will 25X1 give a presentation in RED amplifying the information in their proposal. It is anticipated that an RED briefing for [ ] recommending future action on this matter, will be available shortly thereafter.

C. See Attachment 1 (TOP SECRET - [ ]) for the report 25X1 of RED/RSB significant events for February 1970.

[ ]

Deputy Chief  
Research & Engineering Division

Attachment:

1. [ ]

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6 March 1970

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MEMORANDUM FOR: Chief, Research &amp; Engineering Division, TSSG/NPIC

SUBJECT : Reconnaissance Systems Branch Monthly Report  
February 1970

## Significant Events for the Month of February 1970:

1. [ ] Navy R&D, on a new laser reconnaissance collection system. Mr. Lundahl was briefed on the system after which the document concerned was turned over to [ ]
2. [ ] ORD, regarding a possible new collection capability. A memorandum on the results of the meeting will be given limited distribution.
3. RSB prepared and submitted to NRO an NPIC recommendation for a target test area for the new NRO SLR program. The recommendation was accepted by [ ] and contract negotiations for the design and development of the test system will begin in the first week of March.
4. [ ], briefed [ ] on a new aircraft night reconnaissance system that has been developed for the Air Force. The project, [ ] will be under Wright-Patterson AFB. It makes use of new optical design and image intensifiers that have obtained daylight quality photography at light level as low as  $10^{-5}$ . It has obtained 5' resolutions at 50,000 feet altitude under these conditions. VARO has several capabilities that may be of interest to RED, including the production of optics from melt to finished lens and some work in color photo projections.
5. RSB has begun work on a side-looking-radar chapter for the technical publication Standing Prerequisites for the Exploitation of Collection Systems (SPECS). The publication of NPIC requirements for SLR is needed in view of the development of new and modified SLR systems.
6. [ ] attended a DIA-sponsored meeting on the IRIS II camera improvement program. The program will use [ ] mission material with SAC providing the operational parameters, the Air Force flying the operational missions, NRTSC processing the film, and NPIC/APSD providing the technical evaluation of the film.

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6 March 1970

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SUBJECT: Reconnaissance Systems Branch Monthly Report  
February 1970

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7. [ ] participated in the following meetings:

2 February - a meeting with SOC on [ ] software,  
exposure, and indexing;

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4 February - a meeting with [ ]  
ACIC, regarding [ ] calibrations;

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16 February - a meeting with NRO personnel on PHOTINT-  
ELINT techniques (Mr. Lundahl was briefed on the same  
subject on 19 February); and

17 February - a meeting with the Production Management  
Board and AID personnel to define [ ] tasking for AID.

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8. On 19 February, as Chairman of the [ ] Technical Task  
Team, [ ] briefed COMIREX concerning the [ ] Impact on Exploi-  
tation R&D. Previously he briefed the Executive Director on the same  
subject.

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[ ]  
Chief, Reconnaissance Systems Branch,  
RED/TSSG/NPIC

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